

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001558**Date Inspected:** 25-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhang Zhong**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG-Side Panels/Floor Beams, Tower 47.6M**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Bay 7-OBG Floor Beam Sub Assembly:

QA Inspector Brannon randomly observed ZPMC qualified welder Mr. Zhang Gingquan ID Number 044774 fillet welding at weld joint's 28, 34, 37, 38 & 41 for FB004-04 & FB013-01 joining flange plate to diaphragm web plate.

Mr. Zhang was observed welding in the 2F (horizontal) position utilizing flux cored arc welding (FCAW) process with a 1.4mm diameter electrode, filler metal brand Supercored 71H, class E71T-1 machine. QA Inspector Brannon observed the ZPMC QC Inspector Zhang Zhong verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). QA Inspector Brannon also verified the preheat temperature to be a minimum of 60°C and measured the welding parameters to be 294 amps, 28.7 volts, a travel speed of 446 mm/min and a shielding gas flow of 22L/min. Welding parameters measured by QA Inspector Brannon appear to be in general compliance with the approved WPS-B-T-2132-3, Revision 0. QA Inspector Brannon observed the ZPMC QC Inspector Zhang Zhong verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS).

QA Inspector Brannon randomly observed ZPMC welder's tack welding various stiffener plates to floor beam plates. Floor beam FB021-02 was tacked using flux cored arc welding (FCAW) process in the 2F (position) and FB022-01 was tacked using shield metal arc welding (SMAW) process.

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QA Inspector Brannon randomly observed Miss E. Shuiqin performing ultrasonic testing (UT) on floor beam flange plates FB003-03-103, FB003-04-103 and FB003-05-103. Miss Shuiqin stated to QA Inspector Brannon that the welds complete joint penetration (CJP) are rejected based on her finding

Bay 3-OBG Side Panels Sub Assembly:

NDT (VT/MT):

QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing on the fillet welds for SP050-01, weld joints #015 ~ 028. See Caltrans Magnetic Particle Test Report, TL-6028 dated February 25, 2008 for additional information.

Bay 8 - Tower 47.6 Meter

QA Inspector randomly observed ZPMC personnel performing heat straightening on tower-47.6 meter bottom piece #P407E, ZPMC report #HSR1(T)-047 and tower-47.6 meter top piece #p1424E, ZPMC report #HSR1(T)-049 ist lift. ZPMC flame straightening by natural gas.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

As stated within this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon, Sherri	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
